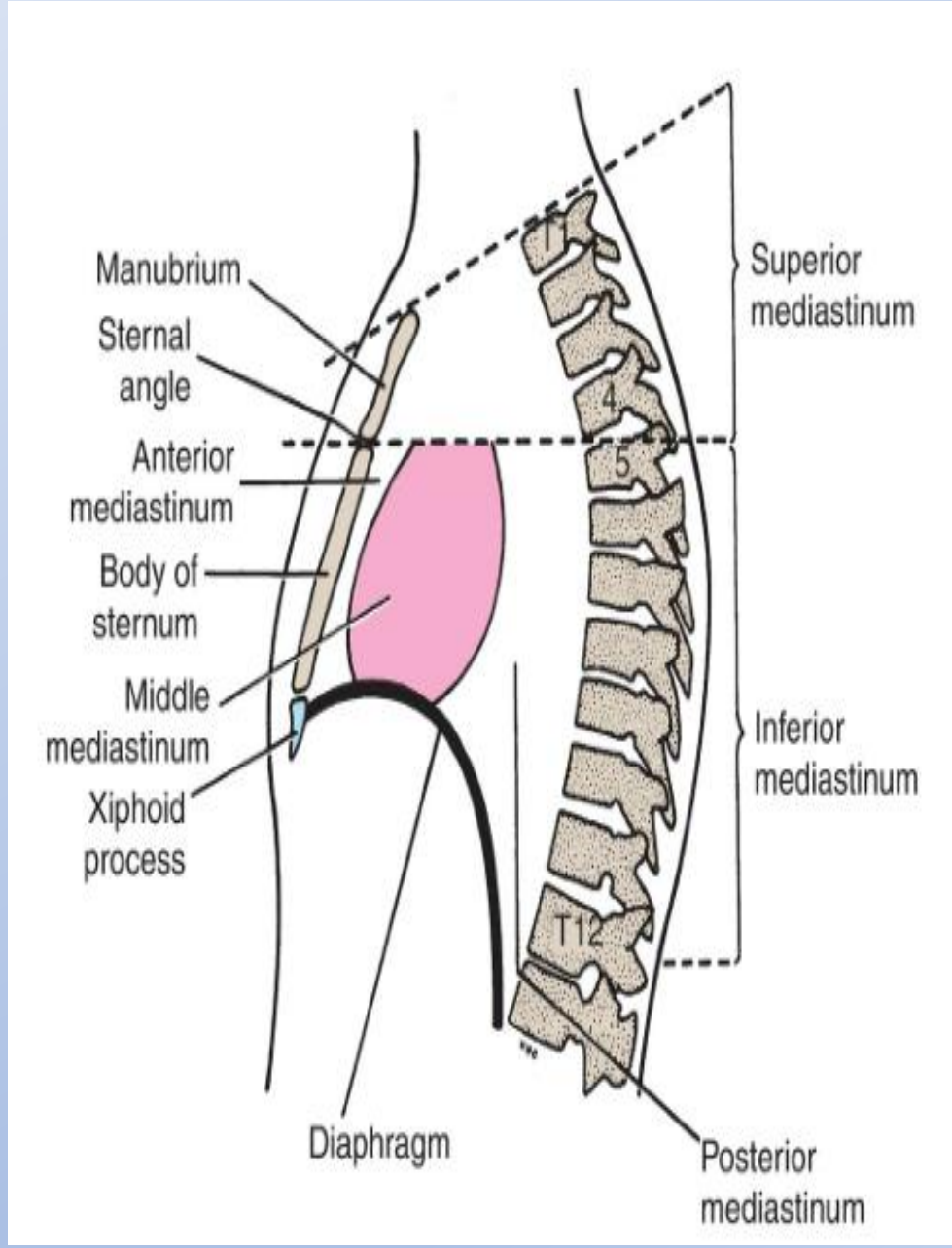
MEDIASTINUM

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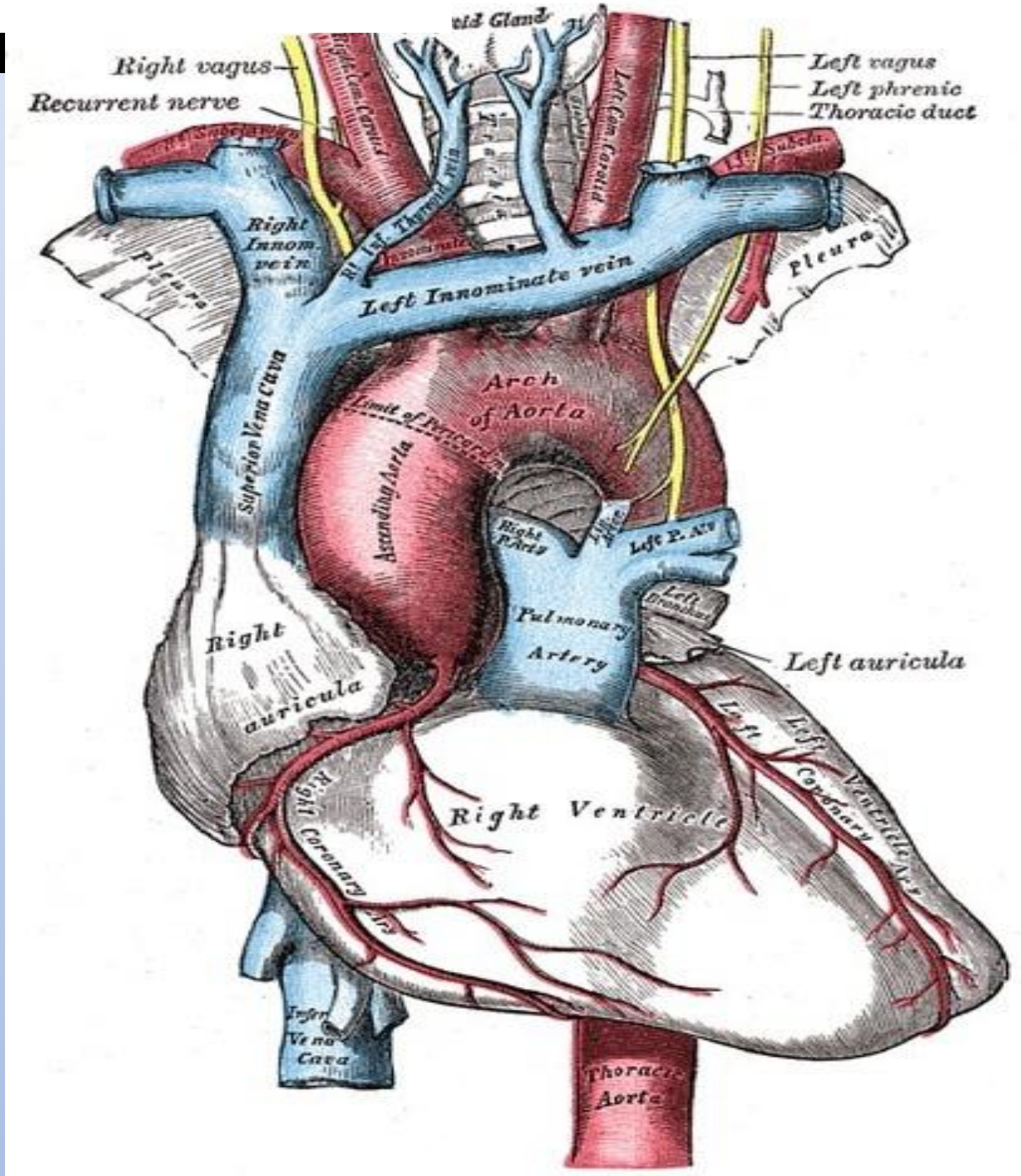
MEDIASTINUM

- he mediastinum is the area between the sternum, the two pleural cavities, and the vertebral column
- it is a movable partition that extends
- superiorly to the thoracic outlet and the root of the neck
- and inferiorly to the diaphragm.
- It extends anteriorly to the sternum and
- posteriorly to the vertebral column



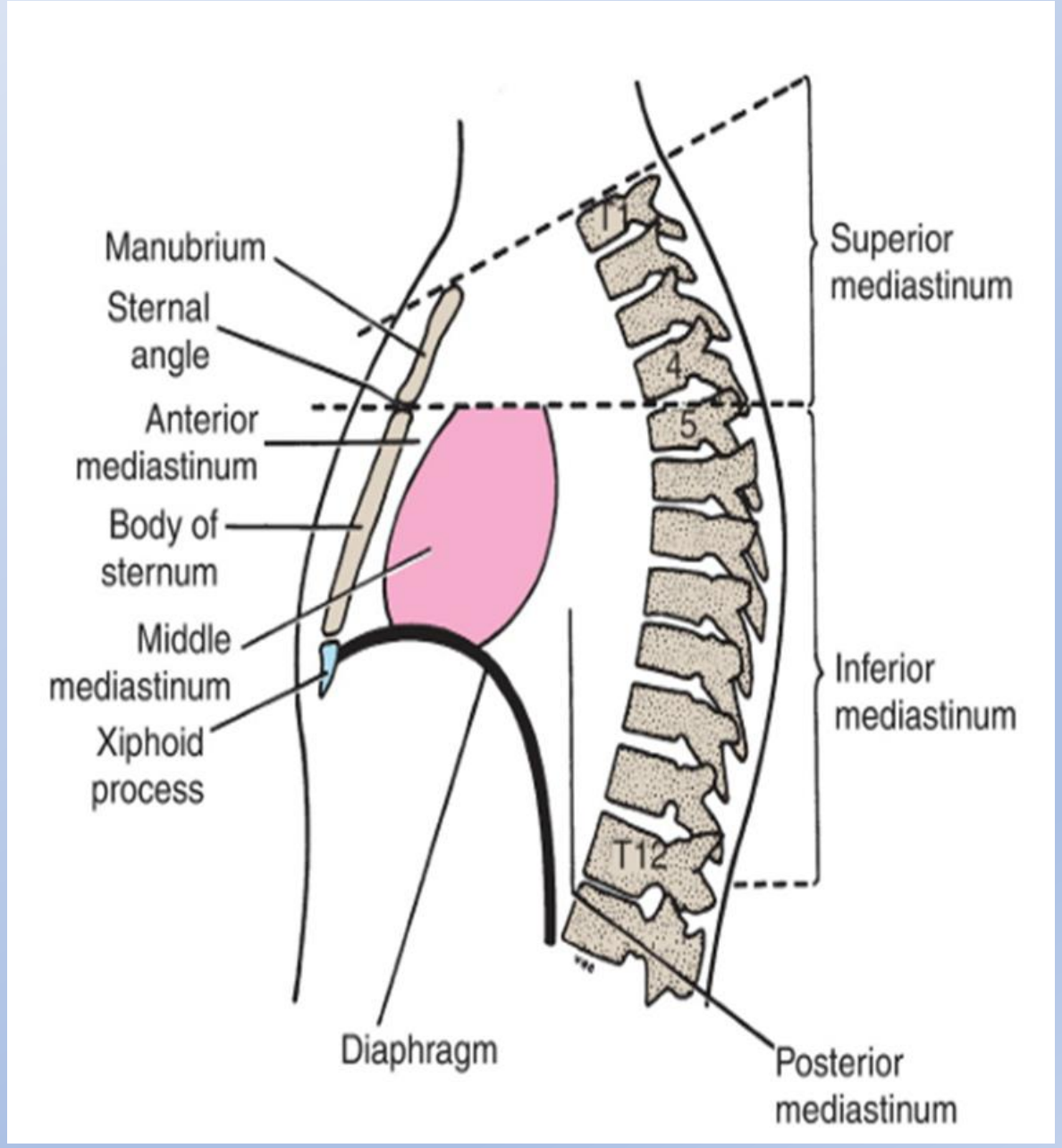
contains

- It contains the remains of the thymus,
- the heart and large blood vessels,
- the trachea and esophagus,
- the thoracic duct and lymph nodes,
- the vagus and phrenic nerves, and the sympathetic trunks.



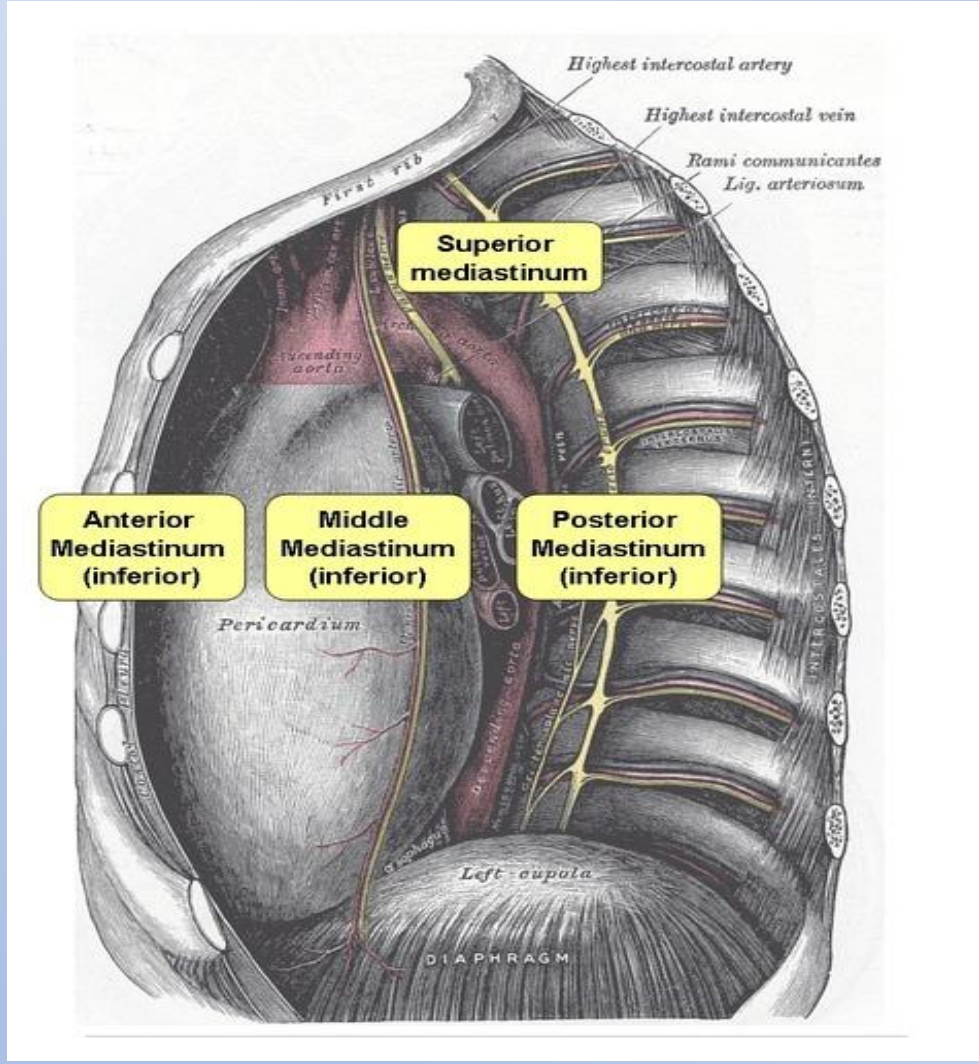
parts of mediastinum

- The mediastinum is divided into
- superior and inferior mediastina by an imaginary plane passing from the sternal angle anteriorly to the lower border of the body of the fourth thoracic vertebra posteriorly).
- This plane is a noteworthy landmark in that it marks several key structures:



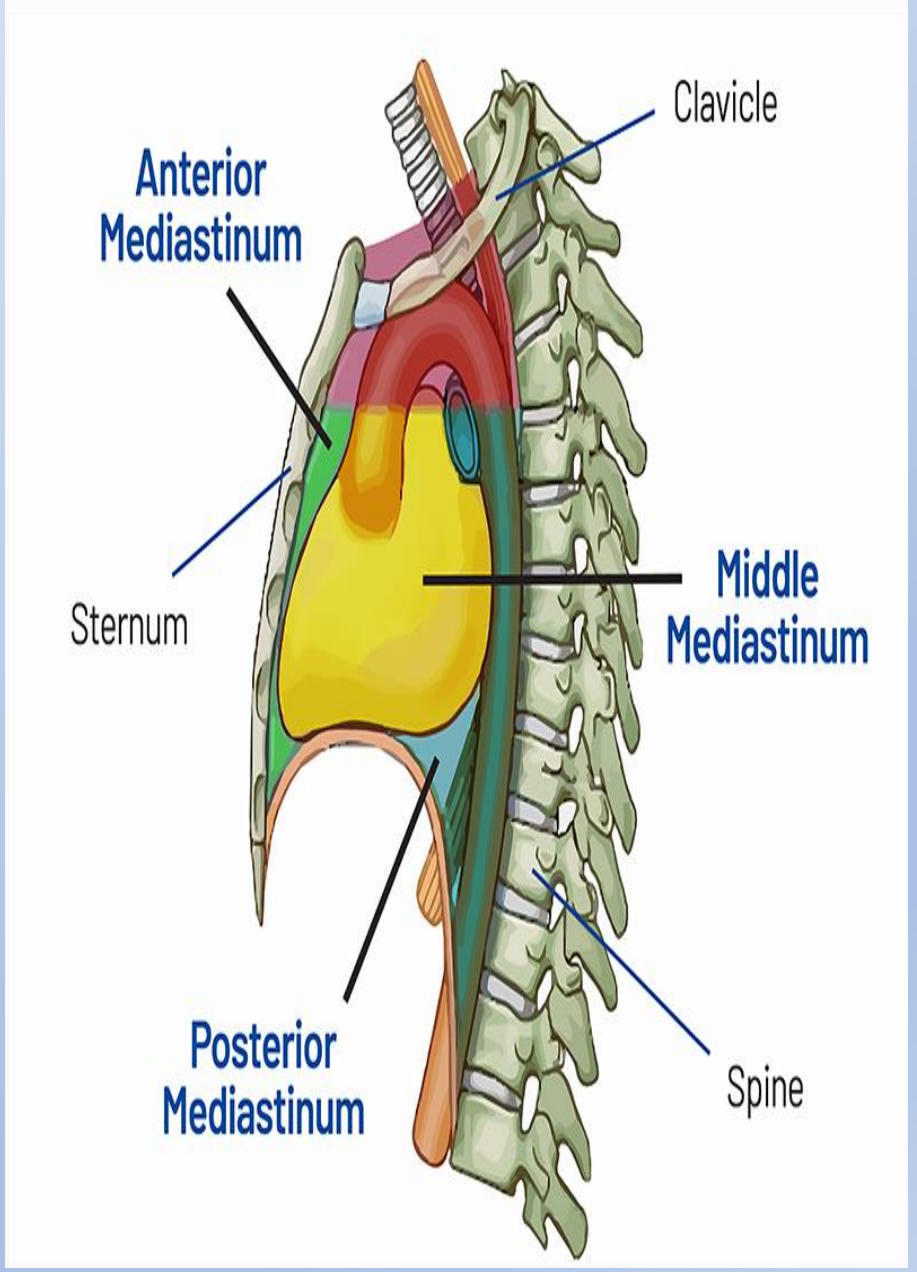
. From anterior to posterior, these are the

- Joint between the manubrium and body of the sternum
- Second costosternal joint
- Demarcation between the ascending aorta and the arch of the aorta
- Demarcation between the arch of the aorta and the descending thoracic aorta
- Bifurcation of the trachea
- Level of the left primary bronchus
- T4 intervertebral disc



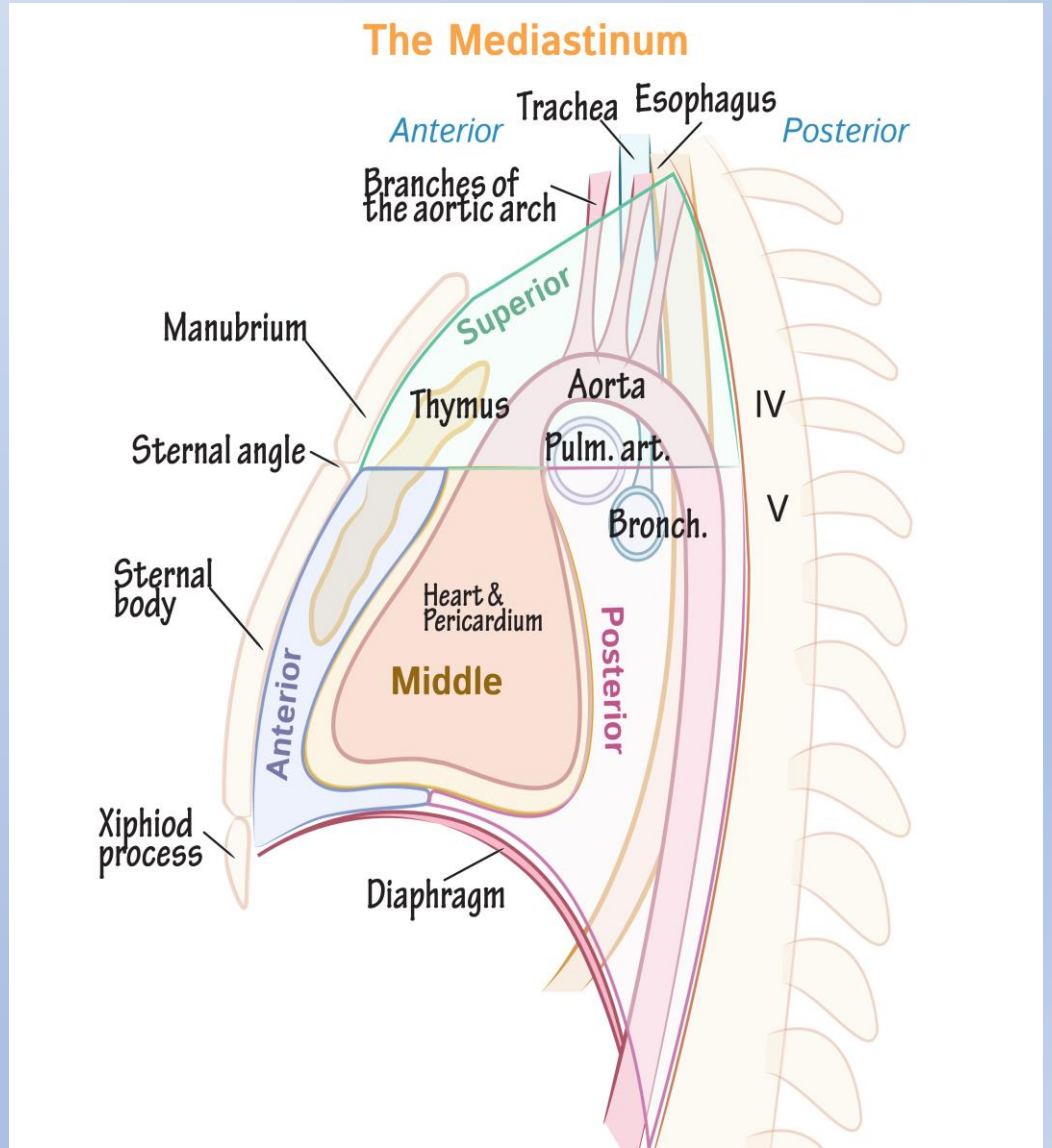
Inferior mediastinum

- The inferior mediastinum is further subdivided into the middle mediastinum,
- which consists of the pericardium and heart;
- the anterior mediastinum, which is a space between the pericardium and the sternum;
- and the posterior mediastinum, which lies between the pericardium and the vertebral column.
- For purposes of orientation, it is convenient to remember that the major mediastinal structures are arranged in the following order from anterior to posterior.



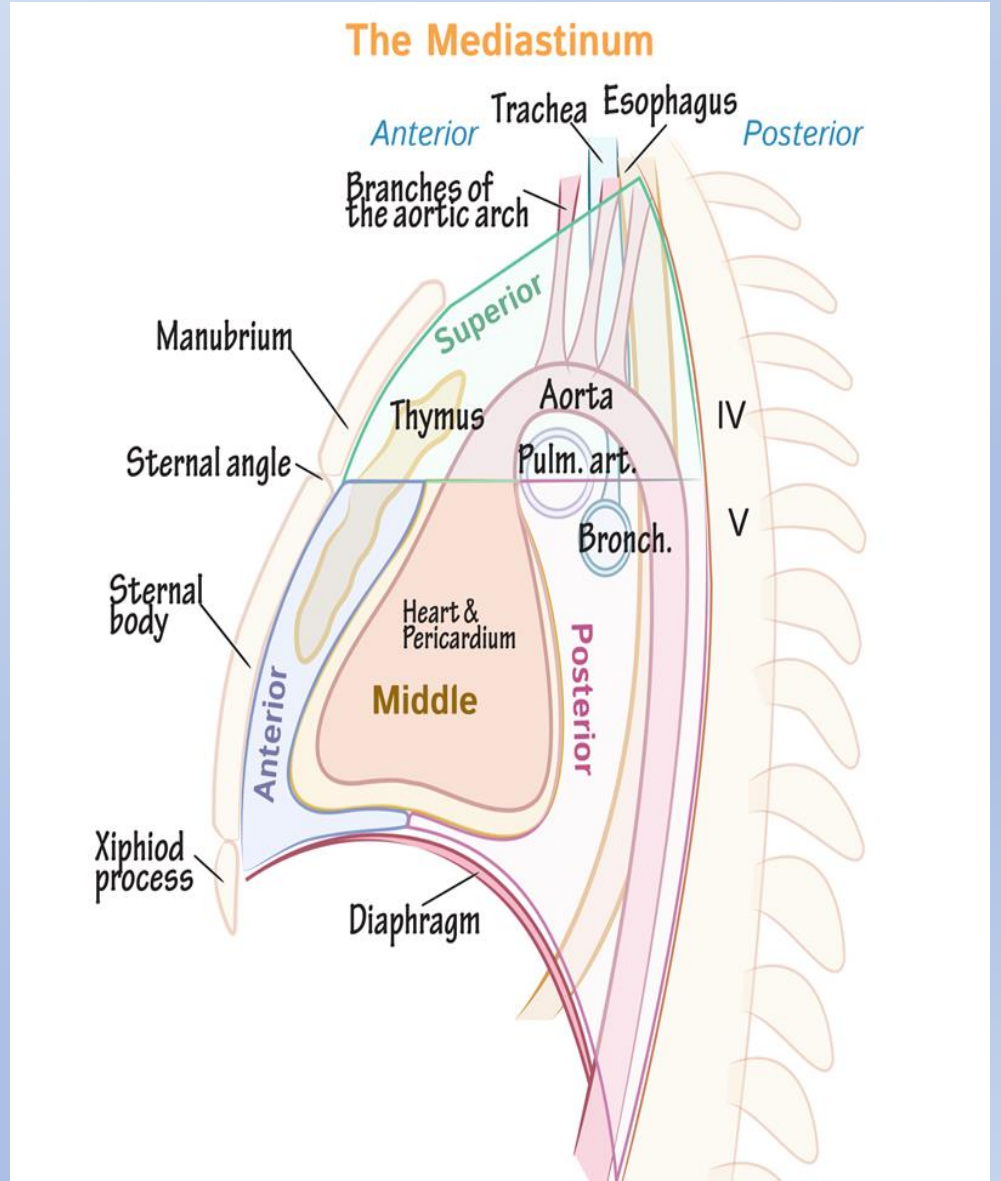
Contents of superior mediastinum

- (1) Thymus
- (2) large veins,
- (3) large arteries,
- (4) trachea,
- (5) esophagus and thoracic duct,
- (6) sympathetic trunks. The superior mediastinum is bounded in front by the manubrium sterni and behind by the first four thoracic vertebrae



Contents of Inferior Mediastinum

- The inferior mediastinum is bounded in front by the body of the sternum and behind by the lower eight thoracic vertebrae
- (1) Thymus,
- (2) heart within the pericardium with the phrenic nerves on each side,
- (3) esophagus and thoracic duct,
- (4) descending aorta,
- (5) sympathetic trunks.



Deflection of the Mediastinum

- In the cadaver, the mediastinum is an inflexible, fixed structure because of the hardening effect of the preserving fluids. However, in the living, it is very mobile; the lungs, heart, and large arteries are in rhythmic pulsation, and the esophagus distends as each bolus of food passes through it. If air enters the pleural cavity (a condition called pneumothorax), the lung on that side immediately collapses and the mediastinum is displaced to the opposite side. This condition reveals itself by the patient being breathless and in a state of shock; on examination, the trachea and the heart are displaced to the opposite side.

Mediastinitis

- The structures that make up the mediastinum are embedded in loose
- connective tissue that is continuous with that of the root of the neck. Thus, it
- is possible for a deep infection of the neck to spread readily into the thorax,
- producing a mediastinitis. Penetrating wounds of the chest involving the
- esophagus may produce a mediastinitis. In esophageal perforations, air
- escapes into the connective tissue spaces and ascends beneath the fascia to
- the root of the neck, producing subcutaneous emphysema.

Mediastinoscopy

- Mediastinoscopy is a diagnostic procedure whereby specimens of tracheobronchial lymph nodes are obtained without opening the pleural cavities. A small incision is made in the midline in the neck just above the suprasternal notch, and the superior mediastinum is explored down to the region of the bifurcation of the trachea. The procedure can be used to determine the diagnosis and degree of spread of carcinoma of the bronchus.